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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/523,732

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Erwin Blomsma

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EXAMINER

WEISZ, DAVID G

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/523,732	Applicant(s) BLOMSMA ET AL.	
	Examiner DAVID WEISZ	Art Unit 4153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20050131</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-8, 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Antonenko et al. (US 5,866,342).

Regarding claims 1 and 13, Antonenko discloses an assembly for performing parallel chemical experiments, said assembly comprising:

-a main body having a first and second face on opposite sides thereof, multiple bores extending through said main body between said first and second face (**C4/L14-15**),

-liners each having an opening at the first face of the main body, each liner removably fitting in a bore in the main body, the liners are each provided at the first face of the main body with at least one outwardly directed support projection (**see “vessel liner” C5/L20-25**), and the bores in the main body are each provided with a corresponding recess for receiving the support projection (**Figure 4**),

-first closure means for closing the openings of the liners at the first face of the main body, which first closure means comprise one or more elastic first sealing members (**60**) and a first cover plate, so that said first sealing members are interpositioned between the ends of the liners and the first cover plate (**Figure 4a**),

-said first closure plate being fastenable to said main body, so that a closed experimentation chamber is defined within each liner (**Figures 1 and 2**),

-wherein the liners are tubular liners, each liner also having openings at opposite ends thereof, and wherein second closure means are provided for closing the openings of the liners at the second face of the main body, said closure means comprising one or more second elastic sealing members and a second cover plate which is fastenable to the main body (**60**), so that said second sealing members are interpositioned between the ends of the tubular liners and the second cover plate (**see Figure 4a**).

Regarding claim 2, Antonenko discloses all of the claim limitations as set forth above. Additionally, the reference discloses the assembly wherein said first closure means comprises multiple first sealing members, each first sealing member engaging an end face of a liner (**see Figure 4 and 4a**).

Regarding claim 3, Antonenko discloses all of the claim limitations as set forth above. Additionally, the reference discloses the assembly wherein at least one of the first face of the main body and the first cover plate is provided with recesses at the locations of the liner ends for receiving a first sealing member (**See Figure 4a**).

Regarding claim 4, Antonenko discloses all of the claim limitations as set forth above. Additionally, the reference discloses the assembly wherein said second closure means comprises multiple sealing members, each second sealing member engaging an end face of a liner (**see Figure 4 and 4a**).

Regarding claim 5, Antonenko discloses all of the claim limitations as set forth above. Additionally, the reference discloses the assembly wherein at least one of the

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second face of the main body and the second cover plate is provided with recesses at the locations of the liner ends for receiving a second sealing member (**see Figure 4a**).

Regarding claim 6, Antonenko discloses all of the claim limitations as set forth above. Additionally, the reference discloses the assembly wherein at least one of the first and second cover plate is provided with bores extending in line with the bores of the main body, and wherein at least one of the first and second sealing members are pierceable (**see Figure 4a**).

Regarding claim 7, Antonenko discloses all of the claim limitations as set forth above. Additionally, the reference discloses a method for performing parallel chemical experiments, wherein use is made of a system comprising:

- an assembly for performing parallel chemical experiments, said assembly comprising (**col4/l14-15**):

- a main body (**22**) having a first and a second face on opposite sides thereof, multiple bores extending through said main body between said first and second face (**figure 1**),

- tubular liners (**62**) having openings at opposite ends thereof, each liner removably fitting in a bore in the main body (**Figure 4**),

- first closure means for closing the openings of the liners at the first face of the main body (**Figure 4a**),

- second closure means for closing the openings of the liners at the second face of the main body (**Figure 4a**),

-said first and second closure means being fastenable to said main body, so that an experimentation chamber is defined within each liner (**Figure 4a**), and

-A filtration device having channels with inlets corresponding to the bores in the main body of the experimentation assembly and a filter in each channel, so that—after removal of the top cover plate of the experimentation assembly when in horizontal position and of the associated at least one sealing member (**44 and 40**)—said filtration device is brought against the top face of the main body, after which said system is reversed and the contents of the experimentation chambers enters said channels in the filtration device and is filtered (**Figure 4**).

Regarding claim 8, Atonenko discloses all of the claim limitations as set forth above. Additionally, the reference discloses that said channels in said filtration device have outlets and wherein said system further comprises a collecting device having collecting chambers with inlets corresponding to the outlets of the filtration device, such that the filtered contents of the experimentation chambers enters said collecting chambers (**see 44 and 40, Figure 4**).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 9-12 and 14-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Antonenko et al (US 5,866,342) as applied to claims 1-8 above in view of Carlson et al. (US 2003/0116497).

Regarding claim 9, Atonenko discloses all of the claim limitations as set forth above. However, the reference does not disclose that crystallization is effected in the experimentation chambers.

Carlson discloses a method and apparatus for performing parallel synthesis and screening of salts and polymorphic forms of drug candidates [0002]. Additionally, the reference discloses the apparatus to include multiple experimentation chambers (**see Figure 21**) with needle members for aspiration (**2020**). Additionally, Carlson discloses that the apparatus for parallel synthesis decreases the time needed to find a suitable form of active ingredient for formulation and allow for additional forms of active pharmaceutical ingredients to be discovered [0012].

Carlson and Atonenko are analogous because both references are directed toward running multiple experiments in parallel microarray devices.

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It would have been obvious for one of ordinary skill in the art at the time of the invention to use the parallel synthesis method and apparatus in the experimentation and filtration device of Atonenko because it would be more time effective.

Regarding claim 10, modified Atonenko discloses all of the claim limitations as set forth above. Additionally, the reference discloses a system for performing parallel chemical experiments, in particular crystallisation experiments, said system comprising:

- an assembly for performing parallel chemical experiments, in particular crystallisation experiments (**Col4/L14-15**), said assembly comprising:

- a main body (**22**) having a first and a second face on opposite sides thereof, multiple bores extending through said main body between said first and second face (**Figure 1**),

- tubular liners having openings at opposite ends thereof, each liner removably fitting in a bore in the main body (**Figure 4**),

- first closure means for closing the openings of the liners at the first face of the main body (**Figure 4a**),

- second closure means for closing the openings of the liners at the second face of the main body (**Figure 4a**),

- said first and second closure means being fastenable to said main body, so that an experimentation chamber is defined within each liner (**Figure 4a**), and

- heating means for heating the content in the experimentation chambers, wherein said main body is a solid body of a heat conducting material, and wherein said heating

- means are mounted in contact with at least one of said main body and cover plate (**see**

- "heating element" C1/L55-67**), and wherein at least one of the first and second closure

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means comprise sealing members which are pierceable (**see Carlson, Figure 20c**), and wherein the system further comprises a vapour discharge assembly, said vapour discharge assembly comprising multiple hollow needle members (**Carlson, (2020)**), each adapted to be pierced through a sealing member so that vapour discharges via said hollow needle members (**see Carlson, Figure 20c**).

Regarding claim 11, modified Atonenko discloses all of the claim limitations as set forth above. Additionally, the reference discloses the system wherein said needle members are upwardly directed and arranged to pierce through the sealing members sealing the bottom face of the experimentation assembly in horizontal orientation (**Carlson, Figure 20c**).

Regarding claim 12, modified Atonenko discloses all of the claim limitations as set forth above. Additionally, the reference discloses the system wherein the system further comprises a feed assembly for feeding a substance into the experimentation chambers, said feed assembly comprising at least one hollow needle member adapted to be pierced through a sealing member (**Carlson, [0299]**).

Regarding claim 14, modified Atonenko discloses all of the claim limitations as set forth above. Additionally, the reference discloses the assembly used for solid form screening of molecules (**Carlson, [0002]**).

Regarding claim 15, modified Atonenko discloses all of the claim limitations as set forth above. Additionally, the reference discloses that the solid form screening of molecules is for active pharmaceutical ingredients (**Carlson, [0012]**).

Regarding claim 16, modified Atonenko discloses all of the claim limitations as set forth above. Additionally, the reference discloses that the solid form screening of molecules is selected from the group consisting of salt screening, polymorph screening, and enantiomer separation screening (**Carlson, [0002]**).

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID WEISZ whose telephone number is (571)270-7073. The examiner can normally be reached on Monday - Thursday, 7:30 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Basia Ridley can be reached on (571)-272-1453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tony G Soohoo/
Primary Examiner, Art Unit 1797
AU 4153 TA

/D. W./
Examiner, Art Unit 4153